LS-V25000 Radio Modem User Manual

LS-V25000 radio modem is a professional high performance data transmission radio combining with newest RF chip and wireless communication technology. This radio supports multiple frequency band, VHF or UHF. With 25W power output, it has long transmission distance which reaches about more than 20km in open air.

I: Features:

1. High power output: 10W or 25W
2. Long transmission distance: up to 20km
3. VHF band 150MHz band or 230MHz band or 450MHz
4. Data transmission, voice transmission both ok
5. Double PLL, double VCO, High reliability
6. VOX function

II. Data sheet

A、General Index

- frequency：VHF and UHF frequency band (150MHz, 230MHz), can store about 400 channels
- frequency tolerance：±2.5ppm
- Channel spacing：25 KHz
- antenna impedance：50Ω
- environment temperature：-35 ℃~+75 ℃
- modulate mode：MSK
- air baud rate：1200bps/2400bps

B、Receiver Index
- sensitivity： ≤0.25uV
- ignal Noise Ratio(SNR): ≤-50dB
- Adjacent Channel Selectivity: ≥70dB
- Inter modulation interference： ≥70dB
- Spurious respouse immunity： ≥70dB

C、Transmitter Index
- Transmit Power： 25W
- modulate distortion： ≤3%
- residual frequency modulation： ≤-48dB
- frequency deviation： ≤5KHz
- ortho-channel power ratio： ≤-70dB
- stray power： ≤5uW
- RF distance: 20km(25W RF power in the open air)

D、Power supply
- DC： 12 V（±10%）
- waiting current： ≤ 1 6 0 m A
- transmitting current： ≤ 6 A (transmit power 25W)

E、Dimension：
128*108*28mm

III. **Pin Definition**
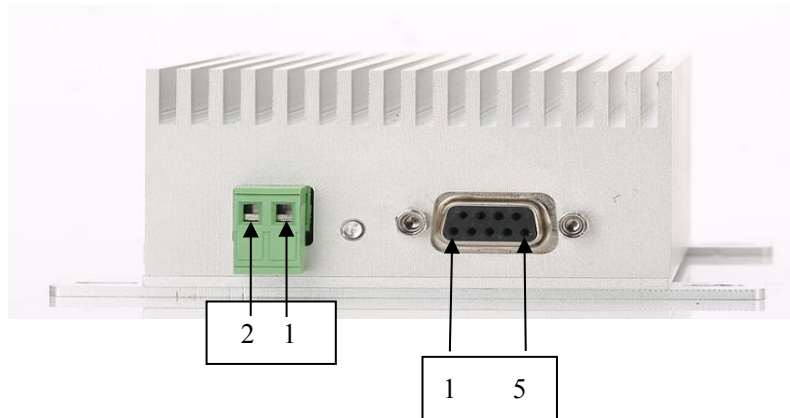
Connector	Pin No.	Pin name	Description	Remarks
Power connection	1	VCC	DC:12V	Please use power DC 12V, more than 8A
	2	GND	Ground of power supply	
Signal connection	1	NC		
	2	RXD（A）	Rxd of RS-232 Rxd of TTL RS-485 A	RS-232,RS-485, TTL, only one valid
	3	TXD（B）	TxD of RS-232 TxD of TTL RS-485 B	RS-232,RS-485, TTL, only one valid
	4	NC		
	5	GND	Signal ground	
	6	PTT	Audio transmitting enable	Low level is for transmitting
	7	MIC	Audio signal input	Microphone input, modulation sensitivity 10mV
	8	SP	Audio signal output	Audio amplifier output 8ohm 0.5W
	9	SQ	Receiving signal checking	Receiving carrier signal, high level

Ⅳ: **Application of LS-V25000**

Salvage, Marine control
public traffic
industrial automatic control
electric power schedule

Contact: Sunny   Phone: 86-13826574847   Email：sunny@lensen-tech.com

water conservancy monitor
signal collection and transmission of railway system
oil extraction and transportation control
measure of oil or water wells
hydrological monitoring
weather station monitoring
forest protection
intelligent building
geological reconnoiter
mobile location
military training

Notes:
1. About the power supply.
This radio's power output is high to 25W. 12V power D.C., at least 8A is recommended to use. Please choose power D.C. with good fluctuation coefficient and anti-interference ability. If you use switch power supply, please keep the antenna far away from it to avoid antenna's inference.

2. About the antenna.
Please choose antenna compatible with your radio's frequency band. For long distance communication, directional and high gain antenna would help to reach better effects. And also, please try to mount antenna at higher level.

Antenna's and its cable's impedance should be accordance with radio's (50 Ω). If not, whole unit's performance will be affected and it may damage the radio.

3. About antenna cable
Choose cable with 50 Ω impedance and low decay material. Make sure it can be connected with radio and antenna successfully. Please also consider waterproof and lightning arrester.

4. Heat emission
If the radio needs to transmit for long time, please pay attention to transfer heat in time.